

ELECTRONIC RECORDS ARCHIVES

MISSION NEEDS STATEMENT (MNS)

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for the

**NATIONAL ARCHIVES AND
RECORDS ADMINISTRATION**

**ELECTRONIC RECORDS ARCHIVES
PROGRAM MANAGEMENT OFFICE
(NARA ERA PMO)**

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ERA MISSION NEEDS STATEMENT (MNS)

Signature Page

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Mission Needs Statement (MNS)

1.0 Mission Area

The National Archives and Records Administration (NARA) ensures, for the private citizen and all branches of the Government, ready access to essential evidence that documents the rights of citizens, the actions of Federal officials, and the national experience. NARA is a public trust which plays a key role in fostering effective and responsible government through management of the lifecycle of records in all three branches of the Federal Government and through sustained access to historically valuable records in the National Archives and the Presidential Libraries. These records enable people to inspect what the Government has done, allow officials and agencies to review their actions, and help citizens hold the Government accountable. These records are rich and varied sources of information that Americans use to answer questions they have about our past.

Increasingly, these records are created and maintained in electronic formats. To continue to fulfill its mission, NARA needs to respond effectively to the challenge posed by the diversity, complexity, and enormous volume of electronic records being created today and the rapidly changing nature of the systems that are used to create them. Electronic records pose unique difficulties including ease of erasure and advancing technology that renders records and operating systems obsolete in a short period of time. The greatest challenge to managing and preserving electronic records is that the environment is dynamic and unpredictable. America is only at the beginning of “e-government.” Technology will continue to change. Citizens, businesses and government agencies at all levels will increasingly use computers and networks. Undoubtedly, they will profit from improvements in technology to develop new and better ways to do business, and these will produce new types of electronic records and recordkeeping systems. But no one knows exactly how these things will evolve.

Regardless of what the future brings, proper records will be needed to support the efficient functioning of the Government, to protect the rights of individuals and businesses, and to ensure that the Government is accountable to its citizens. Thus the challenge of electronic records is that of open-ended change played out against an enduring need. The solution itself must be dynamic, capable of responding to continuing change, and it must be sound, ensuring that electronic records delivered to future generations of Americans are as accurate decades in the future as they were when first created. Unless we can solve the technological challenge of preserving electronic records, NARA will be unable to meet its statutory mission.

2.0 Relationship to NARA’s Strategic Plan

NARA has identified four strategic goals to ensure continued preservation and access to records of the Federal Government in *Ready Access to Essential Evidence, The Strategic Plan of the National Archives and Records Administration, 1997-2007 (Revised 2000)*.

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They are as follows:

- One: Essential evidence will be created, identified, appropriately scheduled, and managed for as long as needed.
- Two: Essential evidence will be easy to access regardless of where it is or where users are for as long as needed.
- Three: All records will be preserved in appropriate space for use as long as needed.
- Four: NARA's capabilities for making the changes necessary to realize our vision will continuously expand.

The electronic records challenge impacts NARA's pursuit of each of these four strategic goals. To address the first of these goals NARA needs to provide the Federal Government with processes, tools, and guidance for the identification, management, and transfer of its records to NARA in a way that facilitates their preservation through time. NARA's approach to preservation of electronic records must be scalable and immune to continuing changes in information technologies in order to ensure that records will be preserved in an appropriate environment, the third of NARA's strategic goals.

The second goal, providing continuing access to records in a timely and efficient manner, requires implementation of a flexible framework rather than a rigid system. The design of the framework must accommodate continuing, unforeseeable changes in technology and allow NARA to deliver essential evidence for users on any target technology in the future. This flexibility also supports NARA's goal of continuously expanding our capabilities for making changes necessary to realize our vision, as does NARA's approach to investigating the issues surrounding the preservation of electronic records through collaborations and partnerships with Federal agencies, universities, the private sector, and other governments. These partnerships will allow NARA to achieve its goals and also increase its ability to benefit from advances in research and development in many areas and bring new approaches to the problems we face.

To attain these goals, NARA must develop a solution to the challenges of preserving electronic records that is stable and reliable in the face of continuing change. There are no commercial solutions available today or under development. NARA must make an investment in an Electronic Records Archive (ERA) to capture, preserve, and provide access to electronic records or risk losing them forever. NARA also requires that ERA be scalable both upward to meet NARA's exponentially growing workload, and downward both to handle small sets of records, such as those of temporary commissions, and to benefit smaller archives, including the archives of state, local, and tribal governments, libraries, universities, and private institutions.

3.0 Current Capabilities and Deficiencies

NARA is not new to the preservation of electronic records. Three decades ago, the agency developed an electronic records preservation strategy. Since that time, NARA has evolved that strategy to accession, preserve, and provide access to approximately 140,000 flat files, early generation database files, relational databases and other records that could be represented in highly-structured tabular manner. This strategy calls for the storage of data in a software and

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hardware-independent format (typically fixed length or delimited files in a standard character set, such as the American Standard Code for Information Interchange [ASCII]), on a master and back-up copy of proven, commercially available storage media.

For the storage of the data that have been accessioned, NARA adheres to prescribed environmental standards, performs annual statistical sampling to guard against any loss of data, and copies the records onto new media before any deterioration of the current media occurs. Historically, media refreshment has occurred on a 10-year cycle and media are stored offline.

NARA's current services for providing access to electronic records in its holdings allow researchers to search NARA-created finding aids (in hard copy or on the World Wide Web) to identify what collections are available. NARA then allows researchers to obtain copies of documentation on the structure and content of those collections or to visit NARA's facility in College Park, MD to review that documentation and purchase copies of entire data sets for their own use. NARA also has made the content of a few of its most frequently requested collections available via the Internet and it has the ability to produce public use versions of data files that contain some restricted data elements.

NARA's success in this area notwithstanding, the systems, processes, and technical strategies NARA has developed over the last three decades to support preservation, management, and sustained access to electronic records in structured data files, are not versatile enough to deal with the variety of electronic records that are the by-products of office automation.

NARA has identified the following six key deficiencies:

- NARA's current tools for capturing, preserving, and providing access to archival electronic records are not flexible enough to accommodate the complexity of records produced by decision support systems, interactive World Wide Web sites, architectural or engineering designs, modeling or visualization tools.
- The current solution does not provide the capability to manage diverse file formats used by Federal agencies, such as those used in capturing audio, video, or image-based records or those used in office automation.
- Unique requirements and opportunities for preservation of electronic records in the context of lifecycle management of records are not adequately articulated. While there are well-established standards and best practices for conversion of paper records to microform, there is no comparable body of knowledge to apply in deciding on the many options available in carrying electronic records forward in time. America's veterans would not be well served, for example, if Veterans Administration hospitals could not use their military medical records because they were locked up in obsolete formats that could not be accessed using state-of-the-art medical technology.
- NARA's existing solutions do not scale to accommodate the sheer volume of data and the number of records that are potential candidates for transfer to the National

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Archives or Presidential Libraries over the next few years. The potential demand for service, although not yet precisely measured, is expected to be enormous. A conservative 1999 estimate indicates that the yearly volume of e-mail traffic in the Federal Government is approaching 36.5 billion messages per year. Moreover, according to the most recent Office of Management and Budget statistics on approved information collections, the Federal Government, in one Fiscal Year, plans to engage in 71 billion transactions with the American public. Federal law requires “accurate and complete documentation of the... transactions of the Federal Government.” (44 USC 2902) Clearly, even if only a fraction of Federal e-mail traffic or a portion of the transactions between the Government and Americans produce materials of “record” status, the volume presents a formidable records management issue. Equally as startling are the figures associated with collections of electronic records that agencies have already scheduled for transfer to NARA. For example, the Census bureau will be transferring 600-800 million digital images, comprising over forty terabytes of data, from the 2000 Census. Over its thirty year history, NARA has captured and fully-processed less than one terabyte of data.

- NARA’s current solution is not flexible enough to deal with the rapidly-changing nature of technology. As technology advances are made, new and modified record formats are created. The current capability can not easily be extended or adapted to manage these new and modified formats.
- Limited access to current electronic records holdings is a further problem. In today’s world, users expect immediate access to data via Internet connections in schools, libraries, homes and businesses. Modern technology is both necessary and advantageous for discovery and delivery of electronic records. The current solution cannot be extended to fully provide such access to the variety of records that will be accessioned in the future.

4.0 Mission Needs

The deficiencies in NARA’s current capability for preserving electronic records drive a set of mission needs for NARA. The following mission needs are identified:

- Records creators (Federal agencies, Presidential administrations, Congress, et. al.) need a set of policies, standards, and guidance to ensure the transfer of documentary materials to NARA in formats that can be preserved. To meet its mission, NARA must provide guidance to allow agencies to deal with the wide variety of complex record formats that they create, and that guidance must be flexible enough to easily adapt to future formats.
- NARA must be able to accept, preserve, and provide access to electronic records and ensure preservation of their content, context, structure and presentation. The agency’s current systems are only partly able to accomplish this and only for a single class of electronic records. To meet its mission, NARA must provide such a capability that can ingest more complex records and records in a wider variety of formats while still maintaining flexibility to accommodate future formats.

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- NARA must be able to store records in a manner that is independent of any particular hardware and software platform. These materials must be stored over long periods of time and the system that preserves them must be efficient enough to keep up with potentially exponential growth in the volumes of records awaiting transfer. Given the quantity of records that are candidates for transfer and the lack of capability to accommodate them, NARA must create a scalable system to preserve and store electronic records.
- NARA must provide capabilities to ensure that its users are able to access all of the electronic records that they are entitled to see and that restricted materials are only provided to those users with appropriate access rights and privileges. This is extremely difficult to accomplish given the large volume of materials that will need to be reviewed for Freedom of Information Act, Presidential Records Act, or other restrictions. NARA must create a system that can support such review in an efficient manner.
- NARA must provide access to its holdings in a manner that is consistent with current technology and the changing expectations of its diverse user communities. This need entails capitalizing on continuing advances in information technology to provide better services for discovery and delivery.
- NARA must protect the authenticity of the records it preserves while carrying them across successive generations of information technology. To meet this need, it must be able to identify the essential record characteristics of the materials it preserves and both map them to, and distinguish them from, features of the technologies used to create, store or transmit them.
- NARA must integrate its solution for preservation and long-term access to archival electronic records with the guidance and direction it provides for lifecycle management of those records throughout the Federal Government.

5.0 Summary

Increasingly, our society does business by computer. To the extent that we rely on information technology in the course of our affairs, we must be able to rely on the electronic records that are the instruments and by-products of our activities. We must be able to access and use them effectively in the continuing conduct of affairs. We must be able to rely on them to define and assert our rights, and to hold our public officials accountable. Long after the needs of current affairs have been met, the essential records must serve the interests of future generations in understanding our national experience.

ERA will be a comprehensive, systematic, and dynamic means for preserving virtually any kind of electronic record, free from dependence on any specific hardware or software. When operational, ERA will make it easy for NARA customers to find records they want and easy for NARA to deliver those records in formats suited to customers' needs. Moreover, ERA's technology promises to be useful to many kinds of archives, libraries, agencies, and businesses, regardless of size. ERA will preserve essential evidence and make it more accessible in every sector of society.

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APPENDIX A: References

The following documents were used to develop this MNS.

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